

CLAIMS

1. A method for gas stunning of poultry for slaughter arriving at the poultry slaughterhouse for example in transport crates, where gas stunning of the animals is effected after the animals have been taken out of the transport crates, and where the animals by means of a number of conveyors are conveyed successively through a stunning chamber, *characterised* in that the influence of the gas for stunning of the animals is adjusted by reducing or prolonging the conveying time and/or the active conveying route length of the animals on said conveyors through the stunning chamber.
2. A method according to claim 1, *characterised* in that the adjustment of the conveying time through the stunning chamber is effected by increasing or reducing the speed of said conveyors.
3. A method according to claim 1, *characterised* in that the adjustment of the length of the conveying route through the stunning chamber is effected by reducing or prolonging the active conveyor runs of the respective conveyors.
4. A method according to claim 1, *characterised* in that the influence of the gas for stunning of the animals is moreover adjusted by varying the gas concentration at varying levels in the stunning chamber as increasing gas concentration is applied in a downwards direction in the stunning chamber.
5. A system for gas stunning of poultry for slaughter cf. the method according to claim 1 and comprising a substantially horizontal conveyor arranged for receiving and introducing poultry for slaughter to a gas-filled stunning chamber in which a downwards running conveyor is arranged, said conveyor being arranged for successively conveying the poultry downwards in the stunning chamber, and an upwards running conveyor arranged for successively conveying the poultry upwards and out of the stunning chamber, *characterised* in that said downwards running conveyor either is constituted by a conveyor having a downwards running course and a horizontal course, and by a downwards running conveyor, said conveyors comprising mutually interacting telescopic members for adjustment of the active

BEST AVAILABLE COPY

AMENDED SHEET

conveying route length, or are constituted by a helical conveyor interacting with a horizontal, telescopic conveyor.

5 6. A system according to claim 5, *characterised* in that said upwards running conveyor is constituted by conveyors having mutually interacting telescopic members, viz. a horizontal conveyor and an upwards running conveyor having a slanting course.

10 7. A system according to claim 5, *characterised* in that the stunning chamber is divided into a number of horizontal zones, for example a lower zone having a gas concentration (CO_2) of 50% (app. 45-51%), an intermediate zone having a gas concentration (CO_2) of 25% (app. 32-46%), and an upper zone having a gas concentration (CO_2) of 5% (app. 8-10%), as sensors are provided in level with the respective upper zone limits for monitoring and control respectively of the gas concentration in the said zones.

15 8. A system according to claim 5, *characterised* in that it comprises a PLC control system for controlling a number of mutually dependent mechanical parameters, for example speed of conveyors, setting (17.6 metres/minute), number of birds (chickens) on conveyors, speed of slaughtering line, setting (148
20 animals/minute).

BEST AVAILABLE COPY

AMENDED SHEET